

Beutnagel 3-12-9

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IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE**Patent Application**

Inventor(s)	Mark Beutnagel Joern Ostermann Schuyler Quackenbusch	Case Name	Beutnagel 3-12-9
Filing Date	1/27/1999	Serial No.	09/238,224
Examiner	Michael Opsasnick	Group Art Unit	2645
Title	Advanced TTS for Facial Animation		

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

AMENDMENT REMARKS

This is in response to an Office action dated May 3, 2002.

Claims 1-5, 7, 10, 13-22 were rejected under 35 USC 103 as being unpatentable over of Lee, US Patent 6,088,673 in view of Campbell, US Patent 6,366,883. Applicants respectfully traverse.

Before proceeding substantively, applicants apologize for a slight error in the previous Office action response. Claim 1 was copied from the marked-up version to form a clean version but, through oversight, the deleted word was not actually deleted, and the added words were added with an underlining. The following is the correct clean copy of claim 1.

* * * * *

1. A method for generating a signal rich in prosody information comprising the steps of:

including in said signal a plurality of phonemes represented by phoneme symbols,
including in said signal a duration specification associated with each of said phonemes,

including, for at least one of said phonemes, at least two prosody parameter specifications, with each specification of a prosody parameter specifying a target value for said prosody parameter and any selected point in time for reaching said target value.

* * * * *

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Discussion of the Lee reference is found in the previous Office action response, and it is hereby incorporated by reference. The conclusion reached by applicants after a thorough analysis of the references was that because the last clause of claim 1 is neither described nor suggested by Lee, that claim 1 in its entirety is not anticipated or rendered obvious by Lee. The Examiner apparently does not controvert this conclusion, because in the instant rejection the Examiner combines the Campbell reference with the Lee reference.

Campbell describes a synthesis system that effectively comprises two sections. The first section analyzes a corpus of stored signals, creates indexes and weighting factors, and forms a corpus of data. The analysis process occurs only **once**. The second section accesses this corpus of data, and in response to an input phoneme sequence synthesizes a speech segment (e.g., a sentence). Thus, the synthesis process can occur **many times**.

With reference to FIG. 1 of Campbell and the text at col. 5, lines 55-65, it is clear that the speech analyzer 10 and the weighting coefficient training controller 11 are in the first section, since the processes performed by them are performed only once, and that the speech unit selector 12 and speech synthesizer 13 are clearly in the second section, since the processes they execute are executed each time a new input phoneme sequence is presented.

The details of the speech synthesis are described in the Campbell reference starting at col. 10, line 55, and ending with col. 15, line 50.

A flow chart of the process carried out by speech analyzer 10 is described starting at col. 15, line 54, and ending at col. 16, line 33. Indeed, FIG. 4 is titled "Speech Analysis Process."

A flowchart of the process carried out by weighting coefficient training controller 11, spanning FIGS. 5 and 6, is described starting at col. 16, line 34, and ending at col. 17, line 29.

The Examiner cites col. 16, line 14 to col. 17 line 23, *which spans a portion of the description relating to analyzer 10 (col. 16, lines 14-33), and the description relating to element 11 (col. 16, line 34 – col. 17, line 23)*. In other words, the text cited by the Examiner relates to teachings of the first section of the synthesis system, that which relates to once-only analysis of the data from which (ultimately) a speech segment can be synthesized. It is not related to, and it teaches nothing regarding, the synthesis portion that occurs each time a phoneme input sequence is presented. Stated in other words, the

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teachings cited by the Examiner are not related to the collection of steps for synthesizing speech; which is precisely to what claim 1 is directed: the inventive collection of steps for synthesizing speech. Therefore, the teachings cited by the Examiner could not possibly teach anything that can be combined with any other reference (Lee included) to suggest, or to realize, a different synthesis process.

Furthermore, the Examiner asserts that Campbell teaches "a selected point in time for teaching the target value," (offering the above-cited text in col. 16, line 14 through col. 17, line 23 in support), but applicants respectfully disagree that the reference, generally, and the cited text in particular, teaches that which the Examiner asserts it teaches.

The first portion of the cited text, which relates to the analysis process that is carried out in analyzer 10, mentions nothing that is related to reaching anything, and certainly not reaching a target at some specified time. If the Examiner disagrees, applicants respectfully request a more focused reference to lines where said a teaching occurs.

The second portion of the cited text, which relates to the analysis process that is carried out in controller 11, also mentions nothing that is related to reaching a target at some specified time. However, the word "target" is found in this second portion, so it bears some explaining. The word "target" is applied with reference to the particular phoneme that it is desired to have in the corpus of data, which might not be there, and which, therefore, the Campbell reference selects some other phoneme that is considered to be the closest match. The corpus of data has many of phonemes, and some are closer to the target phoneme than are others, and in order to identify the closest match to the target phoneme, the FIGS. 5 and 6 process calculates the Euclidean cepstral distances between the phonemes that are considered, and the target phoneme. A weighting coefficient is then calculated and stored.

It is respectfully submitted that this use of the term "target" has nothing to do with the process of synthesis, has nothing to do with a target value of anything, and it has nothing to do with reaching the target value at any particular time. It certainly has nothing to do with a prosody parameter value reaching a target level at a particular point in time.

Therefore, it is believed that adding the teachings of Campbell to the teachings of Lee fails to yield or suggest the method specified in claim 1 and, therefore, it is respectfully submitted that claim 1 is not obvious in view of the Lee-Campbell combination of references.

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The same argument applies to independent claim 21.

In light of the above remarks, it is respectfully submitted that independent claims 1 and 21, and consequently the remaining dependent claims, are not obvious in view of the Lee reference combined with the Campbell reference. Reconsideration and allowance of all claims are, therefore, respectfully solicited.

Dated: 9/24/02

Respectfully,
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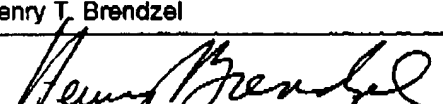
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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>		<i>Complete if Known</i>	
		Application Number	09/238,224
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		First Named Inventor	Mark Beutnagel
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ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Form (<input type="checkbox"/> Check included) <input type="checkbox"/> Fee Form not included, but should a fee be due, the Commissioner is Authorized to charge Deposit Account No 600732 of Henry T. Brendzel <input checked="" type="checkbox"/> Amendment/Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavit(s)/Declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.2 or 1.53 <input type="checkbox"/> Declaration (no Missing Parts Notice)	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition Routing Slip (TO/SB/69) and Accompanying Petition <input type="checkbox"/> To Convert a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation or Change of Correspondence Address <input type="checkbox"/> Express Abandonment <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> To Convert to Statutory Invention Registration	<input type="checkbox"/> Postcard(s) <input type="checkbox"/> Small Entity Statement <input type="checkbox"/> Request for a Refund <input type="checkbox"/> After Allowance Communication to group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communications to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other

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